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Report of the High-Level Advisory Board on Sustainable Development on its fifth session

(New York, 29-31 January 1996)

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SUMMARY

The fifth session of the High-Level Advisory Board on Sustainable Development was held at United Nations Headquarters in New York from 29 to 31 January 1996. It examined three topics: the impact of the global multi-media communications revolution on sustainable development; sustainable energy and transport systems; and the role of the Board in the 1997 review of progress achieved in the implementation of the Rio Commitments.

The Board met with the Secretary-General on 29 and 31 January 1996. A summary of the discussion on 31 January is contained in chapter III of the report.

The Board had before it a number of background papers on particular issues and problems concerning each of the three topics. A number of technical specialists made statements and contributed to the discussion on the three topics.

On the issue of communications, the Board agreed that modern telecommunications and information technologies that were broadly accessible could promote sustainable development by promoting economic growth, providing access to information, promoting civil society and reducing energy-consuming travel. The relatively low cost of such technologies allows developing countries to "leapfrog" older, more expensive technologies. The new technologies, however, also pose risks of promoting consumerism, allowing multinational companies to exploit local situations through better information, overwhelming people with floods of information and reducing cultural diversity.

In order to expand and improve telecommunication services, many countries are now privatizing some services and introducing competition. In order to ensure broad access at affordable prices, countries are using a variety of approaches to the regulation and cross-subsidization of basic services.

The new communication and information technologies also make possible the rapid and inexpensive exchange of information and data through electronic networks, such as the Internet, thus promoting participation in policy-making, the exchange of information within interest communities and the monitoring of sustainable development indicators.

The Board agreed that every country should encourage modern information technologies and should educate the general public to enable households and businesses to benefit from globalization.

On the topic of energy and transportation, the Board noted that fossil fuels currently provide 85 per cent of world commercial energy and 97 per cent of fuel used in transportation. Most of that consumption takes place in developed countries, although most future growth is projected to occur in developing countries, where 2.5 billion people still have little access to

commercial energy. Lack of energy is a barrier to socio-economic development, but production and consumption patterns also contribute to many environmental problems.

The Board agreed that moving towards more sustainable energy and transportation economies will require making major changes in such policies as subsidies for energy and transportation, as well as reorienting energy research programmes. Such changes will yield results only over several decades because of the sheer size of the energy and transportation sectors.

Concerns about the long-term availability of fossil fuels have in recent years given way to concerns about the contribution of carbon dioxide emissions to global warming. The Board agreed that while the world would depend on fossil fuels for many decades to come, there was a great potential for increasing energy efficiency and thus alleviating the environmental impacts of fossil fuels. The potential of non-carbon fuels is also rapidly increasing. The Board agreed that the main obstacle to the wide utilization of energy-efficiency measures and renewable sources of energy is the competitive advantage of fossil fuels, which is likely to prevail as long as their environmental costs are not internalized. The Board intended to address energy issues in greater depth in its future work.

Transportation accounts for 24 per cent of world commercial energy demand, and energy demand for transportation is expected to continue to grow, particularly due to rapid growth in transportation in developing countries. The transportation sector has important impacts on sustainable development through greenhouse gas emissions and the human health effects of pollutants, urban congestion and other factors. Some estimates suggest that the social and environmental costs of current transportation patterns is equal to or greater than fuel costs. While there have been significant improvements in the fuel efficiency of vehicles in recent years, they have been offset by increases in vehicle use and use of less fuel-efficient types of vehicles. The Board urged Governments to report on their progress in responding to the recommendations of the Commission for Sustainable Development to eliminate lead from petrol.

The Board agreed that problems associated with transportation could be alleviated with new technologies for energy-efficient vehicles. Other changes, requiring more time, will include alternative fuels and notably electric-drive vehicles. Changes in the structure of transportation systems to encourage shifting to more efficient modes will make a major contribution to reducing environmental problems, but will require a more complex set of policy interventions.

Policies for sustainable energy and transportation can focus on three main objectives: (a) reducing emissions from transportation systems; (b) shifting to transportation systems with lower emissions; and (c) reducing the demand for transportation. Greater attention particularly needs to be paid to measures to discourage private transportation and encourage the use of public transportation systems.

While full internalization of the environmental costs and benefits associated with transportation is unlikely to be practicable, economic and regulatory measures in that direction should be adopted, in particular the provision of alternative transportation systems, increases in fuel prices and educational campaigns for promoting more modest lifestyles.

Since international competition can be an obstacle to the adoption of environmental policies, more effective and stringent regulation and environmental standards for transportation systems need to be implemented or coordinated at the international level.

The Board agreed that further attention should be paid to a number of questions: limiting the growth of air traffic; incentives for more efficient and cleaner cars; encouragement of least cost planning/demand-side management schemes to stimulate energy efficiency; and internationally agreed environmental taxation schemes.

Concerning the 1997 review of progress achieved in the implementation of the Rio Commitments, the Board decided that it would contribute both by (a) taking initiatives to generate debate on the implementation of the Rio Commitments in the constituencies of Board members and (b) preparing a report for submission to the Commission for Sustainable Development at its fifth session in April 1997. The Board agreed that its report would review the state of the sustainable development debate, consider the impediments to achieving sustainable development and identify actions that need to be taken towards workable targets, focusing on a limited number of critical issues, including energy and transportation as well as more general issues, such as globalization and privatization, increased access to resources and increased participation.

I. THE COMMUNICATIONS REVOLUTION AND SUSTAINABLE DEVELOPMENT

A. Telecommunications and sustainable development

1. Modern telecommunications and information technologies that are broadly accessible can promote sustainable development in a number of ways: by promoting economic growth and diversification; by providing people with information on sustainability; by promoting and facilitating a vigorous civil society; and by reducing energy-consuming transportation, by such means as electronic conferences, video conferences, telecommuting, remote education and telemedicine. The low cost of such technologies relative to older communication systems allows developing countries to "leapfrog" over older technologies: some developing countries already have a higher proportion of digital lines than many developed countries. Modern telecommunications can also help reduce the brain drain by allowing people in developing countries to keep in touch with colleagues and developments worldwide. To realize such benefits, societies should recognize communications as a basic need, and should facilitate universal access.

2. However, the new technologies also pose risks for sustainable development: they may promote the globalization of consumerism through advertising or other means; they threaten to overwhelm people with an unmanageable flood of information of variable quality and reliability, requiring the development of new skills for assessing and managing information; and they may allow large multinational companies to exploit local situations based on their access to better information. There is also a need to ensure that cultural diversity is preserved.

3. While most of the new technologies are developing in response to demand from developed countries, some are of particular interest to developing countries. For example, new radio-telephone technologies allow the extension of basic services to rural and remote areas at a much lower cost than traditional land lines. Telecommunications is also opening new economic opportunities for developing countries by enabling them to provide labour-intensive information services to markets in developed countries. India, for example, has a rapidly growing computer software industry, with clients in developed countries, and in Jamaica more than 25 firms provide information-processing services to clients in the United States of America and Canada.

B. Improving telecommunication services

4. To expand and improve telecommunication services, many countries are now adopting a pluralistic approach to the telecommunication sector that allows the operation of either private enterprises in open competition, regulated private monopolies or other government-owned agencies, with regulations to ensure that all users have access to services at reasonable prices and that all enterprises have fair opportunities in the competitive sectors. There is no single model for such a restructuring process; each process depends on the existing telecommunications organization and infrastructure, the size of the country and

market, its technological level and its economic structure. However, individual countries must bear in mind the global nature of the new information technology.

5. Promoting universal access to basic telecommunication services may require the cross-subsidization of some services. In general, however, telecommunications need not be subsidized from general government revenues because there is normally sufficient capacity to pay. Other telecommunication services, such as information services, electronic mail, remote education, telemedicine or the Internet, should be available on the basis of full cost recovery.

C. Electronic networks

6. Developments in telecommunications, computers, satellites and fibre optic technologies, including both new capabilities and reduced costs, have also opened new possibilities for rapid and inexpensive national and international exchange of information and data through electronic networks, such as the Internet. Such capabilities can serve to promote broad participation in policy-making processes; the exchange of information within non-localized interest communities, such as environmental or women's groups; access to and monitoring of social development indicators; communication between businesses and clients both nationally and internationally; the decentralization of governmental and commercial services; the exchange of data among financial institutions; and a variety of other purposes that contribute to sustainable development. There is a great demand for access to such networks by private organizations, government offices, and research and teaching institutions.

7. For many countries, information and data on national conditions and activities, including sustainable development, are more readily available through international organizations than through national sources. All countries provide information to the United Nations, the World Bank and the specialized agencies, and much of that information is available in various forms, directly or indirectly, through the Internet. The establishment of national networks connected to the Internet will not only provide immediate access to such information but will also encourage national information sources to make data and information directly available on the national network.

8. While most countries in the world have one or more sites connected to the Internet via international leased lines or small satellite terminals, many still do not, particularly in Africa. Among the 48 least developed countries, only two have networks or host computers directly connected to the Internet. The barriers to connection are primarily due not to the complexity or cost of the technology but to institutional and regulatory obstacles.

9. Constraints to the establishment of such networks in some countries include regulatory provisions that prohibit network operators from leasing lines and charging for networking services or limit the use of modems on telephone lines. In other countries, telecommunications agencies have seen electronic networks as a way of improving services and have supported their development.

The United Nations Development Programme (UNDP) Sustainable Development Networking Programme (SDNP) is providing support to developing countries for the start-up phase of electronic networks connecting universities, government agencies, UNDP offices and other offices concerned with sustainable development. The host organization, which is selected by a national steering committee, may be a university, government agency, or non-governmental organization, and is expected to provide all interested users with access to the network and to the Internet, via computer, modem and telephone line. The networks are generally expected to become self-financing through user subscriptions within two years, although the time necessary will depend on the size of the country, the availability of computers and telephone lines, and the initiative of the network organizers. The cost of setting up such a service and operating it for two years has been about $150,000. Since 1992, SDNP has facilitated the introduction of data-transfer nodes in 21 countries, and another 10 are expected to become operational in 1996.

D. Conclusions

10. A communications revolution is under way and the information society is rapidly replacing the industrial society. Every country should encourage modern information technologies, including the Internet and local networks, in order to enable its households and businesses to derive greater benefits from the process of globalization. Countries should prepare for the new era by educating the general public, in particular the illiterate. The young people of each nation will have to be leaders of change, and the older generation will have to ensure the continuity of their culture. The communications revolution represents an enormous challenge, because it will change family life and people's relationships with their spiritual traditions, social customs and social hierarchies.

11. All levels of society should contribute to meeting the challenges of the information society, as follows:

(a) Parents must maintain the cohesion of the family unit;

(b) Grass-roots organizations, communities and interest groups must promote broad public participation in sustainable development;

(c) Local governments must provide a forum for sharing ideas and problems, and for involving the community in its work through such media as electronic bulletin boards;

(d) State or regional governments must provide data banks and expert advice;

(e) Federal governments must prepare an appropriate legal and regulatory framework, must supply funds and must facilitate interaction with large industries in developing a communications infrastructure;

(f) The international community must do more to ensure that all countries benefit from the communications revolution.

II. SUSTAINABLE ENERGY AND TRANSPORTATION SYSTEMS

A. Aspects of the energy problem

12. In the world economy, the consumption of energy and transportation services and investment in those sectors accounts for 10-15 per cent of world gross domestic product (GDP). About 20 per cent of world investment goes into the energy sector, and about 10 per cent goes into transportation infrastructure. The world fossil fuel industry is a $1 trillion-per-year business in a world economy of about $26 trillion. The World Energy Council estimates that annual investments in the entire world energy sector of $1 trillion per year are needed to match expected increases in demand.

13. Worldwide, fossil fuels contribute about 85 per cent of world commercial primary energy supplies, 97 per cent of fuel used in transportation, and 64 per cent of electricity connected to grids.

14. Although most of the consumption of global energy currently takes place in the developed countries, most future growth is projected to occur in the developing countries. In 1990 developing countries accounted for 29 per cent of global energy: that share is projected to increase to almost 50 per cent by the year 2020, while the share of industrialized countries is expected to drop from 51 per cent to just below 40 per cent, and that of economies in transition to drop from about 20 per cent to about 15 per cent.

15. In developing countries, 2.5 billion people, mostly in rural areas, have little access to commercial energy supplies. If lack of energy is a barrier to socio-economic development and growth, the ways in which it is produced and used, together with its current and projected scale, contribute to many environmental problems.

16. Moving towards a more sustainable world energy and transportation economy will require major changes in policies that will in turn yield results only over several decades because of the sheer size of the sector. Yet there are currently many examples of deficient policies. For example, government subsidies for energy prices worldwide are approximately $200 billion per year, and in developing countries total energy subsidies in 1992 was larger than all official development assistance. Another problem is that Governments in developed countries spend over 50 per cent of their $8 billion-a-year energy research budgets on nuclear programmes, whereas renewable energy sources get less than 10 per cent. Businesses that subsidize the use of cars by their employees often get a tax break.

17. Globally, the world energy sector has been the subject of much intensive study over the years, and concerns about the long-term availability and security of fossil fuels have largely given way to concerns about the contribution of anthropogenic emissions of carbon dioxide to global warming, especially in the

work of the Intergovernmental Panel on Climate Change. Concerns have also been raised about the safety of nuclear energy.

18. The world will depend on fossil fuels for many decades to come for both electricity generation and transportation. However, there is a very great potential for increasing energy efficiency, which can theoretically alleviate the environmental impacts of fossil fuels to a large extent. In addition, the potential of non-carbon fuels is rapidly increasing. The main obstacle to the wide utilization of both energy efficiency measures and renewable sources of energy, including solar, wind and tidal energy technologies, is the competitive advantage of fossil fuels, which is likely to prevail as long as their environmental costs are not internalized.

19. The Board intends to address energy issues in greater depth in its future work, but at the present meeting decided to focus on issues in the transportation sector.

B. Transportation issues

20. In 1990, transportation accounted for 24 per cent of world final (commercial) energy demand and about 30 per cent in countries that are members of the Organisation for Economic Cooperation and Development (OECD). Comparable figures for OECD countries in North America and for the developing countries were 34 and 17 per cent, respectively, reflecting the huge gap in motorization between developed and developing countries.

21. In 1990, transportation demand was responsible for two thirds of the additional growth in energy demand in the developed countries, compared with about 15 per cent of the additional growth in developing countries and economies in transition.

22. Globally, about 60 per cent of energy consumption for transportation is accounted for by passenger travel and 40 per cent by the transportation of goods. The transportation of goods and gross national product (GNP) are strongly and positively correlated. The choice of transportation mode over time has favoured faster and more energy-intensive transportation modes. Passenger transportation is much less highly correlated with GNP or GNP per capita: transportation policies, infrastructure availability, urban spatial configurations and sociocultural factors and preferences make a large difference in choice among passenger transportation modes.

23. A number of scenarios of future world transportation demand prepared by IIASA suggest that based on current policies, recent observed trend increases in mobility and changes in transportation modes will dominate the evolution of fuel efficiency, which implies the growth of global transportation energy demand at more or less similar (linear) rates as in previous decades. The scenarios indicate a tendency towards saturation of transportation demand in OECD countries but continued rapid growth in developing countries due to the efforts by many fast-growing developing countries to catch up with the developed countries.

24. The transportation sector is of considerable interest not only because of its importance as a source of greenhouse gas emissions but also because of the effects on human health and the environment associated with other pollutants and a number of other issues, such as traffic accidents, congestion, noise, impeded access to cities, competition for land use and restricted access of the poor to basic services - problems that are of increasing importance in developing countries.

25. Some estimates suggest that the social and environmental costs associated with current transportation patterns at least equal pre-tax marginal fuel costs, and may be as much as four times that amount.

26. While there have been large improvements in fuel efficiency and in controlling emissions per unit of fuel consumed, those effects have been offset in automobile transportation by increased numbers of vehicles per person (motorization); increased numbers of trips per vehicle (mobility); and shifts towards less fuel-efficient types of vehicles, such as minivans, four-wheel drive vehicles and light trucks. In air transportation, there have been large improvements in energy efficiency due to more seating capacity per plane, higher utilization rates and engine improvements, but here again increases in the volume of air travel have meant steadily rising levels of harmful emissions. In addition, the impact of emissions in the stratosphere is more severe than low-level atmospheric emissions.

C. New technologies

27. There are a number of ways in which some problems associated with transportation can yield to improved technology even in the short and medium terms: these are mainly improvements in internal combustion engine design and reformulated fossil fuels resulting in cleaner and more energy-efficient vehicles. Other changes, requiring more time, would include alternative fuels and electric-drive vehicles; the scope for such improvements is especially great for automobiles and buses but less so for air transportation. Changes in the structure of transportation systems to encourage modal shifting towards inherently more eco-efficient modes, such as rail and inland water for freight and increased urban mass-transit and high speed inter-city rail for passenger travel, would make a major contribution to reducing environmental problems but require a more complex set of policy interventions. Beyond the problems of emissions, congestion is also a problem, for the relief of which a combination of mass transit and management of access to congested areas has considerable possibilities.

D. Policies to support and force the pace of change

28. Policies can be focused on three main strategic objectives: (a) the reduction of emissions from each transportation mode; (b) encouraging shifts among transportation modes; and (c) managing transportation demand. Economic investments, regulatory approaches and urban and spatial planning all have important roles to play.

29. Although measures to accelerate the introduction of technologies for reducing harmful emissions and improving fuel efficiency have great potential to reduce environmental impacts, growth in the volume of traffic generally outweighs such gains. Measures to reduce the demand for transportation thus deserve greater attention. Integrated land-use and transportation planning to favour mass transit is one such approach, which might include such measures as (a) concentrating high-density residential development areas and destinations that attract visitors in areas that are well served by public transportation, and perhaps banning supermarkets that are not accessible by public transportation; (b) using revenues from tolls, parking charges, vehicle registration fees and taxes to finance public transportation; (c) restricting access to town centres by means of parking charges, tolls or outright bans; (d) extension of public transportation network coverage, capacity and frequency; (e) enhancement of speed and accessibility, such as by designated lanes for public transportation and car pooling; (f) improved comfort and security; and (g) expanded parking at main transit terminals and park-and-ride facilities in suburban areas. In addition, a number of trends related to the telecommunication and information revolution, such as "teleworking" and "teleshopping", might be encouraged or reinforced by public policy to reduce the demand for low-occupancy commuter travel.

30. Demand management has been utilized in a few cities, together with the provision of mass transit alternatives to reduce congestion in urban areas. Singapore has perhaps the most comprehensive system, involving a number of measures, including automated road charging and steep vehicle ownership and parking charges, that were introduced with advance preparations, including the provision of by-pass routes, park-and-ride facilities and expanded bus service. Despite its high level of per capita income and rapid GDP growth, such measures have reduced the rate of growth of automobiles to about 3 per cent per year. Hong Kong, Oslo and a number of Scandinavian cities are experimenting with similar measures.

E. Preliminary conclusions and policy recommendations

31. The transportation sector is crucially important to national, regional and international strategies for sustainable development. Ample evidence exists that certain types of policy approaches have proven effective in stimulating more energy-efficient and less polluting vehicles, and that more needs to be done to manage demand in ways that address the need for mobility, especially by providing greater consumer choice among transportation modes. Governments are urged to report on their progress in responding to the recommendations made by the Commission at its second session to eliminate lead from petrol.

32. While remaining an important goal, the strict internalization of all the external costs and benefits associated with transportation is unlikely to be practicable; however, policy should move in that direction by adopting appropriate economic and regulatory instruments. Combined with the provision of alternative transportation options, steadily rising fuel prices - perhaps limited to the rate of improvement in the average efficiency of the car fleet - could influence lifestyles, the design of vehicles, the choice of locations for residences and businesses, driver behaviour, the choice of transportation mode

and trip length. Such measures may need to be supplemented by educational campaigns for promoting more modest lifestyles, such as driving smaller cars.

33. Greater international cooperation is also needed. In view of the strong international competition in automobile markets and the relationship of national manufacturers to their Governments, effective action needs to be taken at the international level to develop more effective and stringent regulatory frameworks, such as internationally agreed standards for air quality, motor vehicle emissions and fuel economy at least among OECD countries. Similarly, fiscal and pricing mechanisms for restraining transportation demand, especially fuel or energy taxes, need to be implemented or coordinated at the international level.

34. The following questions may deserve further intensive consideration by the relevant bodies:

(a) Abating the growth rate of air traffic in view of its increasing contributions to global environmental problems;

(b) Devising schemes and incentive systems for introducing more efficient and cleaner cars;

(c) Encouraging all countries to develop least-cost planning/demand-side management schemes, as have been successfully introduced in many localities to stimulate energy efficiency;

(d) Initiating internationally agreed environmental taxation schemes;

(e) Assigning transportation and energy issues that have hitherto been addressed primarily at the national and regional levels by intergovernmental bodies for the consideration of an appropriate intergovernmental body at the international level.

III. MEETING WITH THE SECRETARY-GENERAL

35. The Board met with the Secretary-General during its morning meeting on Wednesday, 31 January. The meeting began with a review by the Chairman, Ms. Birgitta Dahl (Sweden), of discussions over the previous two days. At the request of the Secretary-General, the members of the Board presented their views on critical issues relating to sustainable development, and the Secretary-General responded to those statements.

36. Concerning the communications revolution, there was agreement among Board members that all countries and groups needed to have access to modern information technologies in order to promote sustainable development and broad participation in such development. There were also concerns, however, that the new technologies would lead to growing social and economic gaps and injustice, and would threaten cultural diversity, religious values and even individual freedom; there was therefore a need to study ways to make the new technologies widely accessible and supportive of sustainable development.

37. On the question of sustainable energy and transportation, there was wide agreement that sustainability required fundamental changes in lifestyles and attitudes. Finding ways to promote those changes would require the formulation of alternative scenarios of environmental change and strategies for sustainable development. It was agreed that questions relating to sustainable energy and transportation were not being adequately addressed at the international level. The Board would continue to address questions of sustainable energy and transportation at its future sessions and in its contribution to the 1997 review of progress on the Rio Commitments.

38. More generally, members of the Board emphasized the need to identify impediments to sustainable development and implementation of the Rio Commitments, 1/ and to propose ways to overcome those impediments. There was general agreement that the international political and economic environments were in many ways becoming less conducive to sustainable development. The developed countries were focusing on creating jobs; research funding was increasingly limited to short-term problems; and development assistance was succumbing to "fatigue", fiscal imbalances, pressures of global competition, reduced political priority following the end of the cold war and an increasingly inward orientation on the part of developed countries. For such reasons, members concluded, no progress was being made towards limiting the consumption of natural resources.

39. One sustainable development strategy proposed was to increase the efficiency of resource use. It should be possible to quadruple the goods and services that could be produced with a given quantity of natural resources and energy, which would enable developing countries to quadruple their production and consumption without increasing their environmental impact, while the developed countries could maintain their standard of living while greatly reducing their environmental impact.

40. Another view was that new technologies and improvements in resource efficiency were not going to solve the problem of sustainable development because without fundamental changes in consumption patterns, efficiency was unlikely to increase faster than the volume of consumption. From that point of view, sustainable development was primarily a responsibility of the developed countries, which should avoid exporting their consumerism to developing countries. Societies would have to choose whether they wanted to be high-consumption "engineered worlds", of which Singapore was taken as an example, or more natural and bio-diverse worlds with lower levels of consumption.

41. It was noted that some countries in Asia were enjoying rapid development and were making efforts to improve their environments by such measures as reducing river pollution and reforesting degraded areas, a success in development that was seen to be partly a result of cultural and religious values. A merging of Eastern and Western cultures was proposed to balance material and religious values. It was also noted that some Asian countries had active environmental movements, and that some unsustainable projects, including the construction of dams and projects involving deforestation, had been stopped by popular opposition.

42. It was noted that most countries in Africa were not enjoying any development: their priority was the alleviation of poverty. One member noted that attempts to impose on African countries the norms of democracy that prevailed in developed countries did not offer a solution to poverty.

43. There was widespread agreement that any sustainable development strategy should include the internalization of environmental costs into the prices of goods and services. One member noted that in the current political and economic environment, opposition to subsidies for resource consumption was generally a more effective strategy than direct appeals for environmental protection.

44. A number of Board members, in addressing the question of how to promote sustainable development, called for publicizing success stories and "win-win" situations. It was suggested that sustainable development needed to be presented so as to make it attractive to everyone, which might require it being presented in different ways to different groups. It was suggested that sustainable development should be promoted to a broad public, particularly at the grass-roots level. Such promotion could use a variety of media, including comics and compact disks.

45. The Secretary-General, in his response to the views of the members of the Board, noted that sustainable development was a long-term goal and that the Board could play an important role in emphasizing the need for a long-term perspective. He noted the decline in development assistance and the reorientation of the donor countries towards improving governance and administration in response to the failure of many previous economic assistance programmes. He also noted that political stability was a precondition for effective sustainable development programmes at the national level, and that humanitarian relief efforts in war-torn countries were diverting resources from development assistance.

IV. ARRANGEMENTS FOR FUTURE WORK: CONTRIBUTION TO THE 1997 REVIEW OF PROGRESS IN THE IMPLEMENTATION OF THE RIO COMMITMENTS

46. The Board agreed to make a contribution to the 1997 review of progress achieved in the implementation of the Rio Commitments, 1/ including the following:

(a) Members will envisage initiatives to generate debate on the 1997 review in their own constituencies (consideration should be given to the question of specifying such commitments);

(b) The Board is by definition an independent body, and thus sees some advantage in formulating a report with independent recommendations that could be made available as an input to the fifth session of the Commission, in 1997.

47. The Board was informed of the documentation to be prepared by the Secretary-General for the special session of the General Assembly in June 1997 and the fourth session of the Commission. It agreed that its report to the Commission should be very specific and should not exceed 20 pages.

48. The Board drafted an outline for the report which is contained in annex I, and decided on the following process for its preparation. The members will provide their inputs for the various sectors to the secretariat of the Board, which will prepare a first draft for the sixth session of the Board (4-6 September 1996), at which the Board will conduct an in-depth discussion on issues to be identified. A final draft will be prepared for the seventh session of the Board (January 1997); it may require editing by a professional journalist.

V. ORGANIZATION OF THE SESSION

49. The fifth session of the High-Level Advisory Board on Sustainable Development was held at United Nations Headquarters from 29 to 31 January 1996. Sixteen members of the Board attended: Maria Julia Alsogaray, Christine Amaoko-Nuama, Princess Basma Bint Talal, Birgitta Dahl, Nikolai Drozdov, Abid Hussein, Jörg Imberger, Jacques Lesourne, Marcilio Marques Moreira, Laura Novoa, Qu Geping, Emil Salim, Maurice Strong, Suh Sang-Mok, Mostafa Tolba and Ernst-Ulrich von Weizsäcker. Two members were unable to attend: David Hamburg and David Pearce.

50. The Board unanimously elected the following officers to serve for the 1996-1997 term: Birgitta Dahl (Chairperson), Emil Salim (Vice-Chairperson) and Jörg Imberger (Rapporteur).

51. The session was opened by the Under-Secretary-General for Policy Coordination and Sustainable Development of the United Nations Secretariat. The Chairperson made an opening statement, noting the special role that the Board could play by providing an independent input to the intergovernmental review of the implementation of the UNCED Commitments. Mr. Maurice Strong reviewed the current status of the implementation of the UNCED Commitments and the possible role of the Board in revitalizing the implementation process in the new political and economic context.

52. The opening meeting was also addressed by the Secretary-General, who noted that the Board had been established to provide him with advice on the implementation of Agenda 21 and other efforts in support of sustainable development. He said that the Board could provide ideas and dynamism to the intergovernmental process, and could help to promote understanding of and support for the role of the United Nations in promoting sustainable development, in contrast to the popular misconception that the Organization was primarily focused on peace-keeping activities.

53. The Director of the Division for Sustainable Development of the Department for Policy Coordination and Sustainable Development reviewed preparations for the 1997 special session of the General Assembly to review progress achieved in the implementation of the UNCED Commitments. Ms. Laura Novoa, who was also a member of the Board during the 1994-1995 term, reviewed for the benefit of the new members the work done at the first four sessions of the Board.

54. In its substantive deliberations, the Board examined three topics: the impact of the global multimedia communications revolution on sustainable

development; sustainable energy and transportation systems; and the role of the Board in the 1997 review of progress achieved in implementation of the UNCED Commitments (see agenda in annex II). The Board had before it a number of background papers on particular issues and problems concerning each of the three topics. Technical specialists on electronic networking and sustainable transportation made statements and contributed to the discussion of each topic.

55. The Secretary-General met with the Board again on 31 January (for summary of that meeting, see chap. III above).

56. Substantive services for the session were provided by the Department for Policy Coordination and Sustainable Development.

Notes

1/ The Rio Declaration on Environment and Development, Agenda 21, and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, which are known collectively as the Rio Commitments; see Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annexes I, II and III.

Annex I

OUTLINE OF A REPORT FOR SUBMISSION TO THE COMMISSION ON SUSTAINABLE DEVELOPMENT AT ITS FIFTH SESSION AS A CONTRIBUTION TO THE 1997 REVIEW OF PROGRESS IN THE IMPLEMENTATION OF THE RIO COMMITMENTS

I. THE SUSTAINABLE DEVELOPMENT DEBATE FOUR YEARS AFTER THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT

Crisis of vision and commitment

Less than four years after the Conference, the very vision of sustainable development is under duress and suffering from inbuilt tension. The following questions need to be addressed:

(a) Is sustainable development attainable?

(b) Is it a non sequitur?

(c) Does it matter?

It does matter

Sustainable development is not a dogmatic concept but an asymptotic process in which tension is inherent (for example, intergenerational aspects versus short-term needs).

It is a means for raising the quality of life of human beings, rich or poor.

The eradication of poverty is at the heart of sustainable development.

A sustainable society

Perspectives of what constitutes a sustainable society will vary with different values and political priorities.

The role of the Principles contained in the Rio Declaration on Environment and Development needs to be defined.

II. IMPEDIMENTS TO ACHIEVING SUSTAINABLE DEVELOPMENT

Loss of political momentum

The loss of political momentum is a consequence of a short attention span, combat fatigue and a deep fiscal crisis of the public sector in practically all OECD countries, a crisis that is epitomized by the current situation of the United Nations, which is plagued by financial collapse, a distorted image and low morale.

Lack of financial resources

Official development assistance and specific environmental funding are both inadequate.

Why do the old formulas not work?

Lack of access to technology

Applied technology is private property.

Failure of the market to internalize costs

Sectoral approaches to development

Case-studies: why are the targets in Agenda 21 not being achieved?

Agenda 21 includes a limited number of quantified targets, as described below.

Chapter 6 on health: targets for the eradication/reduction of certain diseases by 2000 (para. 6.12); targets for minimizing health hazards (para. 6.40).

Chapter 7 on human settlements: provision of adequate environmental infrastructure in all settlements by 2025 (para. 7.38); achieve substantial improvements in the efficiency of government activities by 2000 (para. 7.77).

Chapter 10 on integrated land management: improve and strengthen planning, management and evaluation systems by not later than 2000; strengthen institutions and coordinating mechanisms by not later than 1998; and create mechanisms for participation of all concerned by not later than 1996 (para. 10.5).

Chapter 11 on combating deforestation: strengthen the capacities and capabilities of national institutions by 2000 (para. 11.2).

Chapter 13 on mountain ecosystems: develop appropriate land-use planning and management in mountain-fed watershed areas by 2000 (para. 13.15).

Chapter 14 on agriculture: maintain and develop multisectoral plans to enhance sustainable food production not later than 1998; maintain and enhance the ability of developing countries, particularly the least developed countries, to themselves manage policy, programming and planning activities, not later than 2005 (para. 14.8).

(To be completed with other targets)

III. THE WAY FORWARD

(To be discussed in general terms and applied to a limited number of critical issues)

A. General issues

How can we benefit from globalization and privatization? Relevant issues are:

(a) Public control of public goods;

(b) Getting the prices right/internalizing environmental externalities, by:

(i) Appropriate valuation of resources;

(ii) Different trade-offs for national and international (global) problems;

(iii) Recognizing need for a global regime for internalization;

(iv) Establishing principles for convergence of trade and sustainable development.

Increase access to resource flows, technology, finances, and intellectual property, by exploring:

(a) New approaches to mobilization of financial resources;

(b) New approaches to mobilization of technology transfer;

(c) Ways to change attitudes and mindsets (new paradigm in economic theory).

An efficiency revolution is needed to cope with the environmental consequences of predicted growth rates. This will make domestic economies stronger, not weaker. How can information technologies contribute to enhanced efficiency?

Democracy and new forms of governance, involving major groups are needed.

The mobilization of women is a positive force for change.

Participatory structures must be developed at all levels of civil society, including grass-roots organizations and other major groups.

Vulnerable groups should receive priority attention.

Sustainable development curricula should be developed in education programmes from kindergarten to university.

Strategic alliances need to be formed both within countries and externally.

Intersectoral decision-making in the United Nations needs to be fostered. What is the role of the Commission for Sustainable Development?

B. The case of energy

Achievable targets must be established.

C. The case of transportation

Achievable targets must be established (see discussion in sect. II of the present report)

Annex II

AGENDA

1. Opening of the session.
2. Election of officers.
3. Adoption of the agenda and schedule of work.
4. Report of the Board on its fourth session.
5. Impact of the global multimedia communications revolution on sustainable development.
6. Sustainable energy and transport systems.
7. Role of the Board in the 1997 review of progress in the implementation of the Rio Commitments.
8. Other matters.
9. Future work of the Board.
10. Adoption of the report of the Board on its fifth session.

Annex III

CURRICULA VITAE OF BOARD MEMBERS

Chairperson

Birgitta DAHL (Sweden). Speaker, Parliament of Sweden. Member, Executive Committee of the Social Democratic Party. Member, Advisory Council on Foreign Affairs. Former positions include Minister of Environment (1990-1991), Minister of Environment and Energy (1986-1990), Minister of Energy (1982-1986). Received professional education in Sweden (History and Political Science).

Vice-Chairperson

Emil SALIM (Indonesia). Member of the Economic Team of the President of Indonesia; member, People's Consultative Congress; member, Academy of Sciences, Indonesia. Former positions include Minister of State for Population and the Environment; President, Governing Council of UNEP; Professor in Economics, University of Indonesia. Received professional education in Indonesia and the United States of America (Economics). J. Paul Getty award (U.S. World Wild Life Fund). Author of Pemerataan Pendapatan and Perencanaan (1978); Pembangunan Berwawasan (1986).

Rapporteur

Jörg IMBERGER (Australia). Professor of Environmental Engineering, Director of the Centre for Environmental Fluid Dynamics and Chair of the Centre for Water Research, University of Western Australia. Currently Chair of the Western Australia Esturaine Research Foundation and Scientific Adviser to Earthwatch. Member, Australian Academy of Sciences. Past posts include various academic positions in Australia and abroad, and consultancies to many state and federal government bodies and private agencies. Recipient of various awards for contribution to environmental issues. Received professional education in Australia and the United States of America.

Members

Maria Julia ALSOGARAY (Argentina). Member of the National Cabinet; Secretary of the Secretariat for Natural Resources and Human Environment. Former positions include Vice-President, National Defense Commission of the National Chamber of Deputies; Member, Commission of Foreign Relations, National Defense, Science and Technology; National Congresswomen for the Unión del Centro Democrático, Buenos Aires; Delegate of Argentina to the Argentine-Uruguayan Economic Cooperation Agreement; Adviser in the delegation to the Latin American Free Trade Associations; and various positions in the private sector. Received professional education in Argentina.

Christina AMAOKO-NUAMA (Ghana). Minister for Environment, Science and Technology. Former positions include Minister for Environment; environmental consultant active in biodiversity conservation; member of Ghana National

Development Planning Commission. Held various academic positions. Received professional education in Ghana and Canada.

Her Highness Princess Basma BINT TALAL (Jordan). Founder of Queen Alia Fund for Social Development and Chairperson of its Board of Trustees; Chairperson of Arab Association of Women and Development; Chairperson, Jordanian National Committee for Women.

Nikolai DROZDOV (Russia). Environmental writer and Biologist. Associate Professor, Faculty of Geography, Moscow State University; presenter and producer of well-known Russian TV programme "In the world of animals" and other nature programmes. Took part in the UNESCO Man and Biosphere expedition to the Pacific islands of Tonga and Samoa. Author of 20 books and numerous research papers on biology, geography and nature conservation. Recipient of several international awards. Received professional education in the Russian Federation and Australia. Member of Explorers Club and New York Academy of Sciences.

David A. HAMBURG (United States of America). President, Carnegie Corporation of New York. Serves on the boards of the Rockefeller University, the Mount Sinai Medical Center, the American Museum of Natural History, the Johann Jacobs Foundation. Member, American Philosophical Society and American Academy of Arts and Sciences. Former positions include Professor and Chairman, Department of Psychiatry and Behavioral Sciences, and Reed-Hodgson Professor of Human Biology, Stanford University; President of the Institute of Medicine, National Academy of Sciences; Director, Division of Health Policy Research and Education, and John D. MacArthur Professor of Health Policy, Harvard University; Chairman of the Board, American Association for Advancement of Science. Served as Chairman and member of several national science policy groups, including the President's Committee of Advisors on Science and Technology. Research interests and contributions include biological responses and adaptive behaviour, human aggression, biomedical and behavioural sciences, links between behaviour and health, and child and adolescent development. Received professional education in the United States. Author of Today's Children: Creating a Future for a Generation in Crisis.

Abid HUSSEIN (India). Formerly Ambassador to the United States. Currently Vice-Chairman, Rajiv Gandhi Institute for Contemporary Studies, Rajiv Gandhi Foundation.

Jacques LESOURNE (France). Professor, Conservatoire des Arts et Metiers. Former positions include Director, Le Monde; Founder, Society for Economics and Applied Mathematics; Leader, OECD Interfutures Project.

Marcilio Marques MOREIRA (Brazil). Director, Programme of Advanced International Studies, State University, Rio de Janeiro; Special Adviser to the Mayor of Rio de Janeiro and Senior International Advisor to Merrill Lynch; Member of the Advisory Boards of General Electric, South America, Hoechst-Brazil and American Bank Note-Brasil. Previous positions include Minister of Economy, Finance and Planning; Ambassador to the United States; Alternate Director, International Monetary Fund and InterAmerican Development Bank; Adviser to the Minister of Finance and member of the Board of the National Development Bank; several other high-level positions in academia, administration and private

sector. Member of the boards of various other institutions and professional organizations. Author and co-author of several books. Received professional education in Brazil and the United States of America.

Laura NOVOA (Chile). President, PARTICIPA (a Chilean non-governmental organization on education and democracy); member of the Council, PAZ CIUDADANA, member of the law firm Philippi, Yrarrazaval, Pulido and Langlois (mining and corporate matters); formerly responsible for public services in State mining companies; collaborated in the drafting of various bills; member of Commission on Truth and Reconciliation. Recipient of Keogh Award from New York University for distinguished public services. Received professional education in Chile and the United States of America (Law).

David PEARCE (United Kingdom of Great Britain and Northern Ireland). Professor of Environmental Economics, University College, London, and Director, Centre for Social and Economic Research on the Global Environment; Chairman, ECE Economic Group on Acid Rain; member, Scientific Advisory Panel of the Global Environment Facility. Previous positions include Personal Adviser to the Secretary of State for Environment, United Kingdom. Author, co-author or editor of many books on economics, environment, sustainable development; extensive international consultative experience. Received professional education in the United Kingdom.

QU Geping (China). Chairman, Environmental and Resource Protection Committee, National Peoples' Congress. Former positions include Vice-Chairman, Environmental Protection Commission, State Council Administrator, Environmental Protection Agency, China. Head of Mission of China to UNEP. Received professional education (Engineering) in China and the United Kingdom. Author of numerous publications on environmental issues, including China's Environment and Development (1993); Studies on Environmental Services in China.

Maurice STRONG (Canada). Chairman and Chief Executive Officer, Ontario Hydro. Former positions include Secretary-General, United Nations Conference on Environment and Development; Under-Secretary-General and Executive Coordinator, the United Nations Office for Emergency Operations in Africa; Director, United Nations Environment Programme; President and Chief Executive Officer, Petro-Canada; Chairman, Board of Governors, International Development Research Centre, Canada. Received professional education in Canada (Business). Recipient of numerous awards and honorary doctorates.

SUH Sang-Mok (Republic of Korea). Member, National Assembly; Chairman, Kangnam-gu A District Chapter, Seoul; President, Institute for Public Policy Studies. Previous positions include Minister, Ministry of Health and Welfare; Director-General, Policy Coordination Office, the Democratic Liberal Party; member of several National Assembly committees; Vice-President, Korean Development Institute; member, Pacific Board of Economists, Time Magazine; Senior Counsellor to the Deputy Prime Minister and Minister for the Economic Planning Board of the Republic of Korea. Author of several books and articles. Received professional education in the United States.

Mostafa TOLBA (Egypt). Professor, Faculty of Science, Cairo University. President, ECOPAST - Centre for Environment and Cultural Heritage, Washington, D.C.; President, International Centre for Environment and

Development. Former positions include Under-Secretary-General and Executive Director, UNEP; Head, Egyptian delegation to the Stockholm Conference on Human Environment (1972). Received professional education in Egypt and the United Kingdom (Botany). Author of numerous papers on plant diseases, anti-fungal substances and physiology of micro-organisms and on the environment, including Sustainable Development: Constraints and Opportunities (1987).

Ernst Ulrich von WEIZSÄCKER (Germany). President, Wuppertal Institute for Climate, Environment and Energy, Science Centre, North-Rhine Westphalia. Member of the Club of Rome. Previous positions include Director, Institute for European Environment Policy; Director, United Nations Centre for Science and Technology for Development; President, University of Kassel, Germany; Chairman, Association of German scientists. Author of Ecological Tax Reform, Earth Policies; co-author of Factor Four: Doubling Wealth, Halving Resource Use (forthcoming).